

## TWIN HYDRAULIC/PNEUMATIC CYLINDER

**Publication number:** JP11125214 (A)

**Publication date:** 1999-05-11

**Inventor(s):** MIYAZAKI KAORU; ENOMOTO AYAO +

**Applicant(s):** COPROS +

**Classification:**

- international: **F15B15/00; F15B15/16; F16J10/00; F15B15/00; F16J10/00;** (IPC1-7): F15B15/16; F15B15/00; F16J10/00

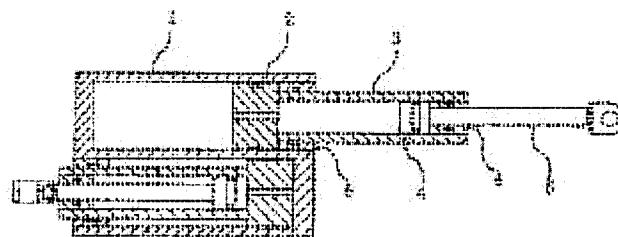
- European:

**Application number:** JP19970309745 19971023

**Priority number(s):** JP19970309745 19971023

### Abstract of JP 11125214 (A)

**PROBLEM TO BE SOLVED:** To maximize the length ratio of extending time to contracting time by respectively arranging cylinder rods so as to extend in the inverse direction from an integrated cylinder tube in the shape of bundling two master cylinder tubes in the inverse direction. **SOLUTION:** Upper and lower master cylinder tubes 1 are integrally manufactured in the opposite direction, and a slave piston 2 and a slave piston rod 3 are incorporated into the master cylinder tube 1, and a sub-piston 4 and a sub-piston rod 5 are also incorporated into its slave piston rod 3. Therefore, a length at contracting time can be shortened by a length of a single master cylinder tube 1 by doubling a length of the master cylinder tube 1, and since a cylinder having the extension/contraction ratio larger than a mere telescopic cylinder, one breath push can be made over a long distance by a short cylinder.



---

Data supplied from the **espacenet** database — Worldwide